```
LLL                  IIIIIIIII      NNN         NNN   KKK         KKK   EEEEEEEEEEEEEEE   RRRRRRRRRRRR
LLL                  IIIIIIIII      NNN         NNN   KKK         KKK   EEEEEEEEEEEEEEE   RRRRRRRRRRRR
LLL                  IIIIIIIII      NNN         NNN   KKK         KKK   EEEEEEEEEEEEEEE   RRRRRRRRRRRR
LLL                     III         NNN         NNN   KKK         KKK   EEE               RRR         RRR
LLL                     III         NNN         NNN   KKK         KKK   EEE               RRR         RRR
LLL                     III         NNN         NNN   KKK         KKK   EEE               RRR         RRR
LLL                     III         NNNNNN      NNN   KKK      KKK      EEE               RRR         RRR
LLL                     III         NNNNNN      NNN   KKK      KKK      EEE               RRR         RRR
LLL                     III         NNNNNN      NNN   KKK      KKK      EEE               RRR         RRR
LLL                     III         NNN   NNN   NNN   KKKKKKKKK         EEEEEEEEEEEE      RRRRRRRRRRRR
LLL                     III         NNN   NNN   NNN   KKKKKKKKK         EEEEEEEEEEEE      RRRRRRRRRRRR
LLL                     III         NNN   NNN   NNN   KKKKKKKKK         EEEEEEEEEEEE      RRRRRRRRRRRR
LLL                     III         NNN      NNNNNN   KKK      KKK      EEE               RRR   RRR
LLL                     III         NNN      NNNNNN   KKK      KKK      EEE               RRR   RRR
LLL                     III         NNN      NNNNNN   KKK      KKK      EEE               RRR   RRR
LLL                     III         NNN         NNN   KKK         KKK   EEE               RRR      RRR
LLL                     III         NNN         NNN   KKK         KKK   EEE               RRR      RRR
LLL                     III         NNN         NNN   KKK         KKK   EEE               RRR      RRR
LLLLLLLLLLLLLLL      IIIIIIIII      NNN         NNN   KKK         KKK   EEEEEEEEEEEEEEE   RRR         RRR
LLLLLLLLLLLLLLL      IIIIIIIII      NNN         NNN   KKK         KKK   EEEEEEEEEEEEEEE   RRR         RRR
LLLLLLLLLLLLLLL      IIIIIIIII      NNN         NNN   KKK         KKK   EEEEEEEEEEEEEEE   RRR         RRR
```

```
                                                                  C  4
**FILE**ID**LNKVMCTRL
```

```
LL          NN      NN  KK      KK  VV      VV  MM      MM    CCCCCCCC  TTTTTTTTTT  RRRRRRRR    LL
LL          NN      NN  KK      KK  VV      VV  MM      MM    CCCCCCCC  TTTTTTTTTT  RRRRRRRR    LL
LL          NN      NN  KK      KK  VV      VV  MMMM  MMMM  CC              TT      RR      RR  LL
LL          NN      NN  KK      KK  VV      VV  MMMM  MMMM  CC              TT      RR      RR  LL
LL          NNNN    NN  KK    KK    VV      VV  MM  MM  MM  CC              TT      RR      RR  LL
LL          NNNN    NN  KK    KK    VV      VV  MM  MM  MM  CC              TT      RR      RR  LL
LL          NN  NN  NN  KKKKKK      VV      VV  MM      MM  CC              TT      RRRRRRRR    LL
LL          NN  NN  NN  KKKKKK      VV      VV  MM      MM  CC              TT      RRRRRRRR    LL
LL          NN    NNNN  KK    KK    VV      VV  MM      MM  CC              TT      RR  RR      LL
LL          NN    NNNN  KK    KK    VV      VV  MM      MM  CC              TT      RR  RR      LL
LL          NN      NN  KK      KK    VV  VV    MM      MM  CC              TT      RR    RR    LL                ....
LL          NN      NN  KK      KK    VV  VV    MM      MM  CC              TT      RR    RR    LL                ....
LLLLLLLLLL  NN      NN  KK      KK      VV      MM      MM    CCCCCCCC      TT      RR      RR  LLLLLLLLLL        ....
LLLLLLLLLL  NN      NN  KK      KK      VV      MM      MM    CCCCCCCC      TT      RR      RR  LLLLLLLLLL        ....
```

```
LL            IIIIII      SSSSSSSS
LL            IIIIII      SSSSSSSS
LL              II      SS
LL              II      SS
LL              II      SS
LL              II      SS
LL              II        SSSSSS
LL              II        SSSSSS
LL              II              SS
LL              II              SS
LL              II              SS
LL              II              SS
LLLLLLLLLL    IIIIII    SSSSSSSS
LLLLLLLLLL    IIIIII    SSSSSSSS
```

```
0 MODULE LNK_VMCTRL (       ! CONTROL FOR ALLOCATION OF VIRTUAL MEMORY
0                  IDENT = 'V04-000',
0                  ADDRESSING_MODE(EXTERNAL=GENERAL,
0                                  NONEXTERNAL=LONG_RELATIVE)
0                  ) =
1 BEGIN
1 !
1 !****************************************************************************
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1 !*  CORPORATION.                                                            *
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1 !*                                                                          *
1 !*                                                                          *
1 !****************************************************************************
1 !
1 !++
1 ! FACILITY:      LINKER
1 !
1 ! ABSTRACT:      THIS MODULE CONTAINS THE ROUTINES TO ALLOCATE VIRTUAL MEMORY
1 !                        AT END OF PASS 1.
1 !
1 !
1 ! ENVIRONMENT:  VMS NATIVE MODE
1 !
1 ! AUTHOR:        T.J. PORTER, CREATION DATE: 15-JUN-78
1 !
1 ! MODIFIED BY:
1 !
1 !       V03-001 BLS0007          Benn Schreiber,         3-Jun-1980
1 !               Convert to MDL data structures.
1 !--
```

```
;     48         0047   1 !
;     49         0048   1 !++
;     50         0049   1 !         FUNCTIONAL DESCRIPTION
;     51         0050   1 !
;     52         0051   1 LIBRARY
;     53         0052   1         'STARLETL32';
;     54         0053   1 REQUIRE
;     55         0054   1         'PREFIX';
;     56         0169   1 LIBRARY
;     57         0170   1         'DATBAS';
;     58         0171   1 !
;     59         0172   1 EXTERNAL ROUTINE
;     60         0173   1         LNK$ALLOBLK : NOVALUE,          ! DYNAMIC MEMORY ALLOCATOR
;     61         0174   1         LNK$DEALBLK : NOVALUE;          ! AND DEALLOCATOR
;     62         0175   1 !
;     63         0176   1 EXTERNAL
;     64         0177   1         LNK$GL_FVMLST;                          ! LISTHEAD OF FREE VIR MEM DESCRIPTORS
;     65         0178   1 !
;     66         0179   1 GLOBAL
;     67         0180   1         LNK$GL_MINVA : INITIAL(MAX_ADDRESS),    ! LOWEST ADDRESS ALLOCATED
;     68         0181   1         LNK$GL_MAXVA : INITIAL(0);              ! HIGHEST ADDRESS ALLOCATED
```

```
1 GLOBAL ROUTINE LNK$ALLOVIRMEM(ADDRESS,PAGES) =
2 BEGIN
2 !
2 !++
2 !       THIS ROUTINE IS CALLED TO ATTEMPT ALLOCATION OF A SPECIFIC
2 !       PIECE OF VIRTUAL MEMORY. THE ADDRESS AND PAGE COUNT REQUIRED
2 !       ARE THE INPUT ARGUMENTS. THE ROUTINE RETURNS TRUE OR FALSE
2 !       DEPENDING ON WHETHER THE SPECIFIED MEMORY IS AVAILABLE OR
2 !       ALREADY ALLOCATED.
2 !
2 !       THE AVALIABLE VIRTUAL MEMORY IS CONTROLLED BY A SINGLY LINKED
2 !       LIST OF BLOCKS WITH FORMAT:
2 !                       -------------------
2 !                       ! NEXT DESCRIPTOR !
2 !                       -------------------
2 !                       !  FREE  ADDRESS  !
2 !                       -------------------
2 !                       !  # FREE  BYTES  !
2 !                       -------------------
2 !
2 !--
2 !
2 LOCAL
2       BYTES,                                          ! BYTE COUNT REQUESTED
2       FREBLK : REF BLOCK[,BYTE],                      ! FREE BLOCK POINTER
2       PREVBLK : REF BLOCK[,BYTE];                     ! PREVIOUS FREE BLOCK IN LIST
2 !
2 IF (BYTES = .PAGES * 512) EQL 0                       ! IF ZERO SIZE
2 THEN RETURN TRUE;                                     ! RETURN SUCCESS
2 !
2 PREVBLK = LNK$GL_FVMLST;                              ! SET AT LISTHEAD
2 WHILE (FREBLK = .PREVBLK[FVM$L_NXTFVM]) NEQ 0         ! MOVE TO NEXT BLOCK DESCRIPTOR IN LIST
2 DO IF .ADDRESS LSSU .FREBLK[FVM$L_ADDRESS]            ! LOOP TILL WE GET TO ONE FOR REQUESTED MEMORY
3    OR .ADDRESS GEQU (.FREBLK[FVM$L_ADDRESS] + .FREBLK[FVM$L_BYTES])
2    THEN PREVBLK = .FREBLK                             ! ...
3    ELSE BEGIN
4       IF (.ADDRESS + .BYTES) GTRU (.FREBLK[FVM$L_ADDRESS] +   ! DOES DESIRED BLOCK FIT
4                               .FREBLK[FVM$L_BYTES])           ! IN THE HOLE
3       THEN EXITLOOP;                                          ! QUIT IF NOT
3       IF .ADDRESS EQL .FREBLK[FVM$L_ADDRESS]                  ! IF AT FRONT OF HOLE
4       THEN IF (FREBLK[FVM$L_BYTES] = .FREBLK[FVM$L_BYTES] -   ! REDUCE THE SIZE OF REMAINDER
3                       .BYTES) EQL 0                           ! AND IF GOING TO ZERO
4               THEN BEGIN
4                       PREVBLK[FVM$L_NXTFVM] = .FREBLK[FVM$L_NXTFVM];  ! TAKE DESCRIPTOR OFF LIST
4                       LNK$DEALBLK(FVM$C_SIZE,.FREBLK);                ! AND DEALLOCATE IT
4               END
3               ELSE FREBLK[FVM$L_ADDRESS] = .FREBLK[FVM$L_ADDRESS] + .BYTES    ! SET ADDRESS OF REMAINDER
4       ELSE BEGIN                                                              ! NOT AT THE FRONT
4               IF (.FREBLK[FVM$L_ADDRESS] + .FREBLK[FVM$L_BYTES]) EQL  ! CHECK IF IT IS ON END
5                       (.ADDRESS + .BYTES)                             ! OF THE BLOCK
4               THEN FREBLK[FVM$L_BYTES] = .FREBLK[FVM$L_BYTES] - .BYTES! IF SO JUST REDUCE SIZE
5               ELSE BEGIN
5                       LOCAL NXTBLK : REF BLOCK[,BYTE];                ! OTHERWISE NEED TO SPLIT THE BLOCK
5                       LNK$ALLOBLK(FVM$C_SIZE,NXTBLK);                 ! ALLOCATE ANOTHER DESCRIPTOR
5                       NXTBLK[FVM$L_NXTFVM] = .FREBLK[FVM$L_NXTFVM];   ! WHICH POINTS ONWARD
5                       FREBLK[FVM$L_NXTFVM] = .NXTBLK;                 ! AND PONTED TO BY CURRENT
5                       NXTBLK[FVM$L_ADDRESS] = .ADDRESS + .BYTES;      ! DESCRIBES THE REMNANT AT END
5                       NXTBLK[FVM$L_BYTES] = .FREBLK[FVM$L_BYTES] -    !
```

```
_$

Sy
--
AC
AC
AC
AC
AC
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AC
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AC
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AC
AL
AL
BU
CO
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CT
CU
DA
DE
EX
EX
EX
EX
EX
EX
EX
EX
EX
EX
EX
EX
EX
IO
IO
LI
LI
LI
LI
LI
LI
LI
LI
LI
LI
```

```
;   127          0239  6                                   (.NXTBLK[FVM$L_ADDRESS] -
;   128          0240  5                                   .FREBLK[FVM$L_ADDRESS]);
;   129          0241  5                       FREBLK[FVM$L_BYTES] = .ADDRESS - .FREBLK[FVM$L_ADDRESS];          ! AND SET CURRENT FR
;   130          0242  4                   END;
;   131          0243  3           END;
;   132          0244  3       IF (.ADDRESS + .BYTES -1) GTRU .LNK$GL_MAXVA                ! MAXIMIZE THE ADDRESS
;   133          0245  3       THEN LNK$GL_MAXVA = .ADDRESS + .BYTES = 1;                  ! SPACE ALLOCATED
;   134          0246  3       IF .ADDRESS LSSU .LNK$GL_MINVA                              ! AND RESET MINIMUM IF NEXESSARY
;   135          0247  3       THEN LNK$GL_MINVA = .ADDRESS;
;   136          0248  3       RETURN TRUE;
;   137          0249  2       END;
;   138          0250  2 RETURN FALSE;
;   139          0251  1 END;                        ! OF LNK$ALLOVIRMEM


                                                                    .TITLE  LNK_VMCTRL
                                                                    .IDENT  \V04-000\

                                                                    .PSECT  $GLOBAL$,NOEXE,2

                                        C0000000  00000 LNK$GL_MINVA::
                                                                    .LONG   -1073741824                                  ;
                                        00000000  00004 LNK$GL_MAXVA::
                                                                    .LONG   0                                            ;

                                                                    .EXTRN  LNK$ALLOBLK, LNK$DEALBLK
                                                                    .EXTRN  LNK$GL_FVMLST

                                                                    .PSECT  $CODE$,NOWRT,2

                                         01FC 00000                 .ENTRY  LNK$ALLOVIRMEM, Save R2,R3,R4,R5,R6,R7,R8    ; 0182
                      58 00000000'   EF    9E 00002                 MOVAB   LNK$GL_MAXVA, R8                             ;
                      5E             04    C2 00009                 SUBL2   #4, SP                                       ;
            56    08  AC             09    78 0000C                 ASHL    #9, PAGES, BYTES                             ; 0208
                                     03    12 00011                 BNEQ    1$                                           ;
                                   00A4    31 00013                 BRW     11$                                          ;
                      57 00000000G   00    9E 00016 1$:             MOVAB   LNK$GL_FVMLST, PREVBLK                       ; 0211
                      54         04  AC    D0 0001D                 MOVL    ADDRESS, R4                                  ; 0213
                      52             67    D0 00021 2$:             MOVL    (PREVBLK), FREBLK                            ; 0212
                                     03    12 00024                 BNEQ    3$                                           ;
                                   0095    31 00026                 BRW     12$                                          ;
                  04  A2             54    D1 00029 3$:             CMPL    R4, 4(FREBLK)                                ; 0213
                                     0B    1F 0002D                 BLSSU   4$                                           ;
            51    04  A2         08  A2    C1 0002F                 ADDL3   8(FREBLK), 4(FREBLK), R1                     ; 0214
                      51             54    D1 00035                 CMPL    R4, R1                                       ;
                                     05    1F 00038                 BLSSU   5$                                           ;
                      57             52    D0 0003A 4$:             MOVL    FREBLK, PREVBLK                              ; 0215
                                     E2    11 0003D                 BRB     2$                                           ;
            55        54             56    C1 0003F 5$:             ADDL3   BYTES, R4, R5                                ; 0217
                      53         08  A2    9E 00043                 MOVAB   8(FREBLK), R3                                ; 0218
            51    04  A2             63    C1 00047                 ADDL3   (R3), 4(FREBLK), R1                          ;
                      51             55    D1 0004C                 CMPL    R5, R1                                       ; 0217
                                     6D    1A 0004F                 BGTRU   12$                                          ;
                  04  A2             54    D1 00051                 CMPL    R4, 4(FREBLK)                                ; 0220
                                     1B    12 00055                 BNEQ    7$                                           ;
                      63             56    C2 00057                 SUBL2   BYTES, (R3)                                  ; 0222
                                     10    12 0005A                 BNEQ    6$                                           ;
```

```
_$
Sy
--
LI
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RU
SC
SC
SC
SC
SC
SC
SS
SS
ST
ST
ST
ST
ST
ST
ST
ST
SY
SY
```

```
                              67        62 D0 0005C       MOVL    (FREBLK), (PREVBLK)                 ; 0224
                                        52 DD 0005F       PUSHL   FREBLK                              ; 0225
                                        0C DD 00061       PUSHL   #12                                 ;
                   00000000G  00        02 FB 00063       CALLS   #2, LNK$DEALBLK                     ;
                                        38 11 0006A       BRB     9$                                  ; 0221
                          04  A2        56 C0 0006C 6$:   ADDL2   BYTES, 4(FREBLK)                    ; 0227
                                        32 11 00070       BRB     9$                                  ; 0221
                              55        51 D1 00072 7$:   CMPL    R1, R5                              ; 0230
                                        05 12 00075       BNEQ    8$                                  ;
                              63        56 C2 00077       SUBL2   BYTES, (R3)                         ; 0231
                                        28 11 0007A       BRB     9$                                  ;
                                        5E DD 0007C 8$:   PUSHL   SP                                  ; 0234
                                        0C DD 0007E       PUSHL   #12                                 ;
                   00000000G  00        02 FB 00080       CALLS   #2, LNK$ALLOBLK                     ;
                              50        6E D0 00087       MOVL    NXTBLK, R0                          ; 0235
                              60        62 D0 0008A       MOVL    (FREBLK), (R0)                      ;
                              62        50 D0 0008D       MOVL    R0, (FREBLK)                        ; 0236
                          04  A0        55 D0 00090       MOVL    R5, 4(R0)                           ; 0237
            51            04  A2    04  A0 C3 00094       SUBL3   4(R0), 4(FREBLK), R1                ; 0240
        08  A0                51        63 C1 0009A       ADDL3   (R3), R1, 8(R0)                     ; 0239
            63                54    04  A2 C3 0009F       SUBL3   4(FREBLK), R4, (R3)                 ; 0241
                              50    FF  A5 9E 000A4 9$:   MOVAB   -1(R5), R0                          ; 0244
                              68        50 D1 000A8       CMPL    R0, LNK$GL_MAXVA                    ;
                                        03 1B 000AB       BLEQU   10$                                 ;
                              68        50 D0 000AD       MOVL    R0, LNK$GL_MAXVA                    ; 0245
                          FC  A8        54 D1 000B0 10$:  CMPL    R4, LNK$GL_MINVA                    ; 0246
                                        04 1E 000B4       BGEQU   11$                                 ;
                          FC  A8        54 D0 000B6       MOVL    R4, LNK$GL_MINVA                    ; 0247
                              50        01 D0 000BA 11$:  MOVL    #1, R0                              ; 0248
                                           04 000BD       RET                                         ;
                                        50 D4 000BE 12$:  CLRL    R0                                  ; 0250
                                           04 000C0       RET                                         ; 0251

; Routine Size:  193 bytes,    Routine Base:  $CODE$ + 0000
;  141          0252   1 GLOBAL ROUTINE LNK$FINDVIRMEM(RETADR,PAGES,LOWESTVA) =
;  142          0253   2 BEGIN
;  143          0254   2 !
;  144          0255   2 !++
;  145          0256   2 !         THIS ROUTINE IS SIMILAR TO LNK$ALLOVIRMEM EXCEPT THAT ANY FREE
;  146          0257   2 !         VIRTUAL MEMORY LARGE ENOUGH IS ALLOCATED, STARTING AT LOWEST
;  147          0258   2 !         ADDRESS END.
;  148          0259   2 !
;  149          0260   2 !         IF LOWESTVA IS SUPPLIED IT SPECIFIES THAT THE VIRTUAL MEMORY
;  150          0261   2 !         ALLOCATED MUST BE AT A HIGHER ADDRESS THAN LOWESTVA
;  151          0262   2 !
;  152          0263   2 !                 RETADR = ADDRESS OF CELL TO RECEIVE THE ADDRESS OF
;  153          0264   2 !                                  THE FIRST BYTE ALLOCATED.
;  154          0265   2 !
;  155          0266   2 !--
;  156          0267   2 MAP
;  157          0268   2     RETADR : REF VECTOR[,LONG];
;  158          0269   2
;  159          0270   2 BUILTIN
;  160          0271   2     NULLPARAMETER;
;  161          0272   2
;  162          0273   2 LOCAL
;  163          0274   2     BYTES,
;  164          0275   2     FREBLK : REF BLOCK[,BYTE],
;  165          0276   2     PREVBLK : REF BLOCK[,BYTE],
;  166          0277   2     SPECIALADR;
;  167          0278   2
;  168          0279   2 IF (BYTES = .PAGES * 512) EQL 0
;  169          0280   3 THEN BEGIN
;  170          0281   3     RETADR[0] = 0;                                          ! IF REQUESTED SIZE IS ZERO
;  171          0282   3     RETURN TRUE                                             ! SUCCESS
;  172          0283   2     END;
;  173          0284   2
;  174          0285   2 SPECIALADR = NOT NULLPARAMETER(3)                           ! SET FLAG IF TO ALLOCATE ABOVE SPECIFIC ADDRESS
;  175          0286   2               AND (.LOWESTVA NEQ 0);
;  176          0287   2
;  177          0288   2 PREVBLK = LNK$GL_FVMLST;                                    ! SET TO START OF LIST
;  178          0289   2 WHILE (FREBLK = .PREVBLK[FVM$L_NXTFVM]) NEQ 0               ! GO DOWN LIST LOOKING FOR LARGE ENOUGH PIECE OF FRE
;  179          0290   3 DO IF (IF .SPECIALADR
;  180          0291   5         THEN ((.FREBLK[FVM$L_ADDRESS] LSSU .LOWESTVA)
;  181          0292   6                 OR ((.FREBLK[FVM$L_ADDRESS]+.FREBLK[FVM$L_BYTES]
;  182          0293   6                                 LSSU .LOWESTVA)
;  183          0294   6                     OR (.FREBLK[FVM$L_ADDRESS]+.FREBLK[FVM$L_BYTES]
;  184          0295   4                                 LSSU .LOWESTVA+.BYTES)))
;  185          0296   3         ELSE (.BYTES GTRU .FREBLK[FVM$L_BYTES]))
;  186          0297   2     THEN PREVBLK = .FREBLK
;  187          0298   3     ELSE BEGIN
;  188          0299   3         RETADR[0] = .FREBLK[FVM$L_ADDRESS];                 ! RETURN ITS VIRTUAL ADDRESS
;  189          0300   4         IF (FREBLK[FVM$L_BYTES] = .FREBLK[FVM$L_BYTES] -    ! REDUCE ITS SIZE
;  190          0301   3                         .BYTES) EQL 0                       ! AND IF COMPLETELY CONSUMED
;  191          0302   4         THEN BEGIN
;  192          0303   4             PREVBLK[FVM$L_NXTFVM] = .FREBLK[FVM$L_NXTFVM];  ! REMOVE DESCRIPTOR FROM LIST
;  193          0304   4             LNK$DEALBLK(FVM$C_SIZE,.FREBLK);                ! AND DEALLOCATE THE DESCRIPTOR
;  194          0305   4             END
;  195          0306   3         ELSE FREBLK[FVM$L_ADDRESS] = .FREBLK[FVM$L_ADDRESS] +  ! OTHERWISE JUST ADJUST THE
;  196          0307   3                                 .BYTES;                     ! VIRTUAL ADDRESS REMAINING
;  197          0308   3         IF (.RETADR[0] + .BYTES - 1) GTRU .LNK$GL_MAXVA     ! MAXIMIZE THE ADDRESS
;  198     0309 3              THEN LNK$GL_MAXVA = ..RETADR + .BYTES - 1;      ! SPACE ALLOCATED
;  199     0310 3          IF .RETADR[0] LSSU .LNK$GL_MINVA                    ! AND RESET MINIMUM IF NEXESSARY
;  200     0311 3              THEN LNK$GL_MINVA = .RETADR[0];
;  201     0312 3          RETURN TRUE                                         ! RETURN SUCCESS
;  202     0313 2          END;
;  203     0314 2 RETURN FALSE                                                 ! NO MEMORY FOUND
;  204     0315 1 END;                                                         ! END OF LNK$FINDVIRMEM



                             007C 00000        .ENTRY  LNK$FINDVIRMEM, Save R2,R3,R4,R5,R6       ; 0252
          56 00000000'  EF   9E 00002          MOVAB   LNK$GL_MAXVA, R6                          :
53     08 AC            09   78 00009          ASHL    #9, PAGES, BYTES                          ; 0279
                        06   12 0000E          BNEQ    1$                                        :
              04        BC   D4 00010          CLRL    @RETADR                                   ; 0281
                      0093   31 00013          BRW     12$                                       ; 0282
          03            6C   91 00016 1$:      CMPB    (AP), #3                                  ; 0285
                        05   1E 00019          BGEQU   2$                                        :
          50            01   D0 0001B          MOVL    #1, R0                                    :
                        09   11 0001E          BRB     3$                                        :
                        50   D4 00020 2$:      CLRL    R0                                        :
              0C        AC   D5 00022          TSTL    12(AP)                                    :
                        02   12 00025          BNEQ    3$                                        :
                        50   D6 00027          INCL    R0                                        :
                        51   D4 00029 3$:      CLRL    R1                                        ; 0286
              0C        AC   D5 0002B          TSTL    LOWESTVA                                  :
                        02   13 0002E          BEQL    4$                                        :
                        51   D6 00030          INCL    R1                                        :
55        51            50   CB 00032 4$:      BICL3   R0, R1, SPECIALADR                        :
          54 00000000G  00   9E 00036          MOVAB   LNK$GL_FVMLST, PREVBLK                    ; 0288
          52            64   D0 0003D 5$:      MOVL    (PREVBLK), FREBLK                         ; 0289
                        6B   13 00040          BEQL    13$                                       :
          1F            55   E9 00042          BLBC    SPECIALADR, 6$                            ; 0291
       0C AC        04  A2   D1 00045          CMPL    4(FREBLK), LOWESTVA                       :
                        1E   1F 0004A          BLSSU   7$                                        :
51     04 A2        08  A2   C1 0004C          ADDL3   8(FREBLK), 4(FREBLK), R1                  ; 0292
       0C AC            51   D1 00052          CMPL    R1, LOWESTVA                              ; 0293
                        12   1F 00056          BLSSU   7$                                        :
50        53        0C  AC   C1 00058          ADDL3   LOWESTVA, BYTES, R0                       ; 0295
          50            51   D1 0005D          CMPL    R1, R0                                    :
                        0D   1E 00060          BGEQU   8$                                        :
                        06   11 00062          BRB     7$                                        :
       08 A2            53   D1 00064 6$:      CMPL    BYTES, 8(FREBLK)                          ; 0296
                        05   1B 00068          BLEQU   8$                                        :
          54            52   D0 0006A 7$:      MOVL    FREBLK, PREVBLK                           ; 0297
                        CE   11 0006D          BRB     5$                                        :
       04 BC        04  A2   D0 0006F 8$:      MOVL    4(FREBLK), @RETADR                        ; 0299
       08 A2            53   C2 00074          SUBL2   BYTES, 8(FREBLK)                          ; 0301
                        10   12 00078          BNEQ    9$                                        :
          64            62   D0 0007A          MOVL    (FREBLK), (PREVBLK)                       ; 0303
                        52   DD 0007D          PUSHL   FREBLK                                    ; 0304
                        0C   DD 0007F          PUSHL   #12                                       :
00000000G 00            02   FB 00081          CALLS   #2, LNK$DEALBLK                           :
                        04   11 00088          BRB     10$                                       ; 0300
       04 A2            53   C0 0008A 9$:      ADDL2   BYTES, 4(FREBLK)                          ; 0307
```

```
                                 50        04   BC  D0 0008E 10$:     MOVL     @RETADR, R0                                         ; 0308
                                 51        FF A340  9E 00092          MOVAB    -1(BYTES)[R0], R1                                   ;
                                 66             51  D1 00097          CMPL     R1, LNK$GL_MAXVA                                    ;
                                                03  1B 0009A          BLEQU    11$                                                 ;
                                 66             51  D0 0009C          MOVL     R1, LNK$GL_MAXVA                                    ; 0309
                         FC      A6             50  D1 0009F 11$:     CMPL     R0, LNK$GL_MINVA                                    ; 0310
                                                04  1E 000A3          BGEQU    12$                                                 ;
                         FC      A6             50  D0 000A5          MOVL     R0, LNK$GL_MINVA                                    ; 0311
                                 50             01  D0 000A9 12$:     MOVL     #1, R0                                              ; 0312
                                                    04 000AC          RET                                                          ;
                                            50  D4 000AD 13$:         CLRL     R0                                                  ; 0314
                                                    04 000AF          RET                                                          ; 0315

; Routine Size:  176 bytes,    Routine Base:  $CODE$ + 00C1


;  205          0316  0 END ELUDOM




;                                    PSECT SUMMARY
;
;      Name                        Bytes                          Attributes
;
;  $GLOBAL$                              8  NOVEC,  WRT,  RD ,NOEXE,NOSHR,  LCL,  REL,  CON,NOPIC,ALIGN(2)
;  $CODE$                              369  NOVEC,NOWRT,  RD ,  EXE,NOSHR,  LCL,  REL,  CON,NOPIC,ALIGN(2)




;                              Library Statistics
;
;                                             -------- Symbols --------       Pages        Processing
;      File                                   Total    Loaded   Percent       Mapped       Time
;
;  _$255$DUA28:[SYSLIB]STARLET.L32;1           9776         6         0        581           00:01.0
;  _$255$DUA28:[LINKER.OBJ]DATBAS.L32;1         538         4         0         28           00:00.5





;                                     COMMAND QUALIFIERS

;       BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/LIS=LIS$:LNKVMCTRL/OBJ=OBJ$:LNKVMCTRL MSRC$:LNKVMCTRL/UPDATE=(ENH$:LNKVMCTRL)

; Size:           369 code + 8 data bytes
; Run Time:          00:09.7
; Elapsed Time:      00:29.0
; Lines/CPU Min:       1962
; Lexemes/CPU-Min:  17180
; Memory Used:  94 pages
; Compilation Complete
```

```
_$2



Vir
Sta
Ima
Ima
Ima
Num
Num
Num
Num
Num
Num
Num
Ima
Map
Est



Per
---




Tot

Usi

Tot


Num

85

A t

LIN
```

0220 AH-BT13A-SE
VAX/VMS V4.0

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